



Express Mail No.: EL 477 036 617 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Herman, et al.

Serial No.: 10/033,741

Group Art Unit: 1645

Filed: December 27, 2001

Examiner: To Be Assigned

For: PROTEINS, GENES AND THEIR USE FOR  
DIAGNOSIS AND TREATMENT OF  
VASCULAR RESPONSE

Attorney Docket No.: 9195-079-999

**TRANSMITTAL OF SUBSTITUTE SEQUENCE LISTING UNDER 37 C.F.R. § 1.821**

Assistant Commissioner for Patents  
Washington, DC 20231

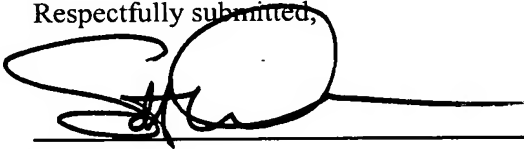
Sir:

Applicants have found an error in the Sequence Listing previously submitted on May 28, 2002. Thus, in accordance with 37 C.F.R. § 1.821, Applicants, in connection with the above-identified patent application, submit herewith a substitute Sequence Listing in paper and computer readable form pursuant to 37 C.F.R. §§ 1.821(c) and (e). Applicants request that this substitute Sequence Listing be substituted for the Sequence Listing previously filed on May 28, 2002.

I hereby state that the content of the paper and computer readable copies of the Sequence Listing, submitted in accordance with 37 C.F.R. §§ 1.821(c) and (e), respectively, are the same.

Respectfully submitted,

Date June 13, 2002

  
Scott Warren

47,167

(Reg. No.)

PENNIE & EDMONDS LLP  
1155 Avenue of the Americas  
New York, New York 10036-2711  
Phone: (212) 790-9090

**RECEIVED**

For: Laura A. Coruzzi  
Reg. No. 30,742  
PENNIE & EDMONDS LLP  
1155 Avenue of the Americas  
New York, New York 10036-2711  
Phone: (212) 790-9090

JUN 21 2002

TECH CENTER 1600/2900

Enclosures



SEQUENCE LISTING

<110> Herman, et al.

<120> Proteins, Genes and Their Use For Diagnosis and Treatment of Vascular Response

<130> 9195-079

<140> 10/033,741

<141> 2001-12-27

<150> 60/260,387

<151> 2000-12-29

<150> 60/254,977

<151> 2000-10-24

<160> 80

<170> PatentIn version 3.1

<210> 1

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 1

Leu Val Gln Glu Val Thr Asp Phe Ala Lys  
1 5 10

<210> 2

<211> 17

<212> PRT

<213> Ratus Norvegicus

<400> 2

Ala Asp Thr Gly Thr Thr Ser Glu Phe Ile Asp Glu Gly Ala Gly Ile  
1 5 10 15

Arg

<210> 3

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 3

Ala Gly Ala Leu Asn Ser Asn Asp Ala Phe Val Leu Lys  
1 5 10

<210> 4

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 4

Ala Lys Pro Ala Leu Glu Asp Leu Arg  
1 5

<210> 5

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 5

Ala Leu Glu Glu Ser Asn Tyr Glu Leu Glu Gly Lys  
1 5 10

<210> 6

<211> 14

<212> PRT

<213> Ratus Norvegicus

<400> 6

Ala Pro Gln Val Ser Thr Pro Thr Leu Val Glu Ala Ala Arg  
1 5 10

<210> 7

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 7

Ala Ser Gly Ile Ile Asp Thr Leu Phe Gln Asp Arg  
1 5 10

<210> 8

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 8

Ala Thr Ile Asp Gln Asn Leu Glu Asp Leu Arg  
1 5 10

<210> 9

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 9

Ala Thr Val Leu Tyr Gln Gly Gln Arg  
1 5

<210> 10

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 10

Ala Thr Trp Ser Gly Ala Val Leu Ala Gly Arg  
1 5 10

<210> 11

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 11

Asp Glu Pro Pro Gln Ser Pro Trp Asp Arg  
1 5 10

<210> 12

<211> 7

<212> PRT

<213> Ratus Norvegicus

<400> 12

Asp Arg Leu Glu Glu Val Arg  
1 5

<210> 13

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 13

Asp Trp Val Gln Glu Thr Met Ala Lys  
1 5

<210> 14

<211> 7

<212> PRT

<213> Ratus Norvegicus

<400> 14

Glu Asp Phe Pro Phe Leu Arg  
1 5

<210> 15

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 15

Glu Asp Gly Gly Gly Trp Trp Tyr Asn Arg  
1 5 10

<210> 16

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 16

Glu Leu Leu Asp Ser Tyr Ile Asp Gly Arg  
1 5 10

<210> 17

<211> 8

<212> PRT

<213> Ratus Norvegicus

<400> 17

Glu Leu Tyr Leu Val Ala Tyr Lys  
1 5

<210> 18

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 18

Glu Gln Pro Ile Leu Ser Glu Phe Gln Glu Lys  
1 5 10

<210> 19

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 19

Glu Val Val Ala Asp Ser Val Trp Val Asp Val Lys  
1 5 10

<210> 20

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 20

Glu Tyr Thr Asp Asp Ser Phe Thr Asn Arg  
1 5 10

<210> 21

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 21

Phe Ala Thr Asn Phe Tyr Gln His Leu Ala Asp Ser Lys  
1 5 10

<210> 22

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 22

Phe Gly Leu Tyr Ser Asp Gln Met Arg  
1 5

<210> 23

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 23

Phe Asn Pro Val Thr Gly Glu Val Pro Pro Arg  
1 5 10



<210> 24

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 24

Phe	Pro	Asn	Ala	Glu	Phe	Ala	Glu	Ile	Thr	Lys
1				5					10	

<210> 25

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 25

Phe	Ser	Ile	Ser	Thr	Asp	Tyr	Ser	Leu	Lys
1				5					10

<210> 26

<211> 6

<212> PRT

<213> Ratus Norvegicus

<400> 26

Phe	Trp	Asp	Tyr	Leu	Arg
1				5	

<210> 27

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 27

Gly Leu Ile Asp Glu Ala Asn Gln Asp Phe Thr Asn Arg  
1 5 10

<210> 28

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 28

Gly Gln Phe Glu Asp Val Thr Leu Tyr Gln Gly Glu Arg  
1 5 10

<210> 29

<211> 8

<212> PRT

<213> Ratus Norvegicus

<400> 29

Gly Ser Phe Pro Trp Gln Ala Lys  
1 5

<210> 30

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 30

Gly Thr Asp Phe Gln Leu Asn Gln Leu Gln Gly Lys  
1 5 10

<210> 31

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 31

Gly Trp Phe Glu Pro Leu Val Glu Asp Met Gln Arg  
1 5 10

<210> 32

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 32

His Gln Phe Leu Leu Thr Gly Asp Thr Gln Gly Arg  
1 5 10

<210> 33

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 33

His Val Val Pro Asn Glu Val Val Val Gln Arg  
1 5 10

<210> 34

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 34

Ile Ala Glu Leu Phe Ser Asp Leu Glu Glu Arg  
1 5 10

<210> 35

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 35

Ile Pro Ser His Ala Val Val Ala Arg  
1 5

<210> 36

<211> 14

<212> PRT

<213> Ratus Norvegicus

<400> 36

Leu Ala Ala Ala Val Ser Asn Phe Gly Tyr Asp Leu Tyr Arg  
1 5 10

<210> 37

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 37

Leu Gly Glu Tyr Gly Phe Gln Asn Ala Val Leu Val Arg  
1 5 10

<210> 38

<211> 14

<212> PRT

<213> Ratus Norvegicus

<400> 38

Leu Gly Asn Ile Asn Thr Tyr Ala Asp Asp Leu Gln Asn Lys  
1 5 10

<210> 39

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 39

Leu Gly Pro Leu Val Glu Gln Gly Arg  
1 5

<210> 40

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 40

Leu Val Gln Glu Val Thr Asp Phe Ala Lys  
1 5 10

<210> 41

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 41

Leu Tyr Leu Gly His Ser Tyr Val Thr Ala Ile Arg  
1 5 10

<210> 42

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 42

Met Gly Tyr Val Ser Gly Trp Gly Arg  
1 5

<210> 43

<211> 14

<212> PRT

<213> Ratus Norvegicus

<400> 43

Met Gln Gln Val Glu Ser Ser Leu Gln Pro Glu Thr Leu Lys  
1 5 10

<210> 44

<211> 7

<212> PRT

<213> Ratus Norvegicus

<400> 44

Met Thr Leu Asp Asp Phe Arg  
1 5

<210> 45

<211> 15

<212> PRT

<213> Ratus Norvegicus

<400> 45

Asn Glu Val Asn Thr Met Leu Gly Gln Ser Thr Glu Glu Leu Arg  
1 5 10 15

<210> 46

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 46

Asn Gly Glu Thr Phe Gln Ala Met Val Leu Tyr Gly Arg  
1 5 10

<210> 47

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 47

Asn His Glu Glu Glu Met Leu Ala Leu Arg  
1 5 10

<210> 48

<211> 7

<212> PRT

<213> Ratus Norvegicus

<400> 48

Asn Ile Met Glu Tyr Leu Arg  
1 5

<210> 49

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 49

Asn	Ile	Pro	Val	Asp	Ser	Pro	Glu	Leu	Lys
1				5					10

<210> 50

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 50

Asn	Pro	Val	Thr	Ser	Val	Asp	Ala	Ala	Phe	Arg
1				5					10	

<210> 51

<211> 7

<212> PRT

<213> Ratus Norvegicus

<400> 51

Gln	Ile	Gly	Tyr	Val	Tyr	Arg
1				5		

<210> 52

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 52

Gln	Leu	Asp	Gln	Gln	Val	Glu	Val	Phe	Arg
1				5					10

<210> 53

<211> 11



<212> PRT

<213> Ratus Norvegicus

<400> 53

Gln	Leu	Ser	Leu	Leu	Thr	Thr	Met	Ser	Asn	Arg
1			5						10	

<210> 54

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 54

Gln	Asn	Glu	Gly	Phe	Ser	Leu	Thr	Ala	Lys
1			5						10

<210> 55

<211> 15

<212> PRT

<213> Ratus Norvegicus

<400> 55

Gln	Gln	Ser	Gln	Val	Leu	Asp	Ala	Met	Gln	Asp	Ser	Phe	Thr	Arg
1			5					10					15	

<210> 56

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 56

Arg	Thr	Gln	Val	Pro	Glu	Val	Phe	Leu	Ser	Lys
1			5						10	

<210> 57

<211> 16

<212> PRT

<213> Ratus Norvegicus

<400> 57

Ser	Asp	Val	Asp	Glu	Asp	Ile	Ile	Pro	Glu	Glu	Asp	Ile	Ile	Ser	Arg
1				5					10					15	

<210> 58

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 58

Ser	Gly	Tyr	Thr	Phe	Gln	Leu	Leu	Arg
1				5				

<210> 59

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 59

Ser	Ile	His	Thr	Leu	Phe	Gly	Asp	Lys
1				5				

<210> 60

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 60

Ser Ser Thr Val Ala Pro Thr Leu Pro Gly Glu Val Arg  
1 5 10

<210> 61

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 61

Ser Val Ser Glu Leu Pro Ile Val His Arg  
1 5 10

<210> 62

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 62

Thr Ala Asn Leu Gly Ala Gly Ala Ala Gln Pro Leu Arg  
1 5 10

<210> 63

<211> 12

<212> PRT

<213> Ratus Norvegicus

<400> 63

Thr Glu Asn Gly Gly Trp Thr Val Ile Gln Asn Arg  
1 5 10

<210> 64

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 64

Thr His Leu Ala Pro Tyr Ser Asp Glu Leu Arg  
1 5 10

<210> 65

<211> 18

<212> PRT

<213> Ratus Norvegicus

<400> 65

Thr Pro Ser Ala Ala Tyr Leu Trp Val Gly Thr Gly Ala Ser Glu Ala  
1 5 10 15

Glu Lys

<210> 66

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 66

Thr Gln Val Pro Glu Val Phe Leu Ser Lys  
1 5 10

<210> 67

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 67

Thr	Arg	Leu	Glu	Gln	Glu	Ile	Ala	Thr	Tyr	Arg
1				5					10	

<210> 68

<211> 13

<212> PRT

<213> Ratus Norvegicus

<400> 68

Thr	Thr	Asp	Ala	Glu	Phe	His	Thr	Phe	Phe	Asp	Glu	Arg
1				5					10			

<210> 69

<211> 8

<212> PRT

<213> Ratus Norvegicus

<400> 69

Val	Ala	Gln	Glu	His	Phe	Gly	Lys
1				5			

<210> 70

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 70

Val	Phe	Phe	Glu	Gln	Gly	Ala	Thr	Arg
1				5				

<210> 71

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 71

Val	Phe	Ser	Gln	Gln	Ala	Asp	Leu	Ser	Arg
1				5					10

<210> 72

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 72

Val	Gln	Pro	Tyr	Leu	Asp	Asp	Phe	Gln	Lys
1				5					10

<210> 73

<211> 8

<212> PRT

<213> Ratus Norvegicus

<400> 73

Val	Thr	Gly	Trp	Gly	Asn	Leu	Arg
1				5			

<210> 74

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 74

Trp	Asn	Glu	Glu	Val	Glu	Ala	Tyr	Arg
1				5				

<210> 75

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 75

Trp Gln Glu Glu Met Glu Leu Tyr Arg  
1 5

<210> 76

<211> 10

<212> PRT

<213> Ratus Norvegicus

<400> 76

Tyr Glu Glu Leu Gln Gln Thr Ala Gly Arg  
1 5 10

<210> 77

<211> 15

<212> PRT

<213> Ratus Norvegicus

<400> 77

Tyr Asn Ala Glu Leu Glu Ser Gly Asn Gln Phe Leu Leu Tyr Arg  
1 5 10 15

<210> 78

<211> 9

<212> PRT

<213> Ratus Norvegicus

<400> 78

Tyr Gln Asn Phe Asp Pro Glu Val Lys  
1 5

<210> 79

<211> 8

<212> PRT

<213> Ratus Norvegicus

<400> 79

Tyr Val Ile Glu Phe Ile Ala Arg  
1 5

<210> 80

<211> 11

<212> PRT

<213> Ratus Norvegicus

<400> 80

Tyr Val Met Leu Pro Val Ala Asp Gln Glu Lys  
1 5 10